Notice of Allowability	Application No.	Applicant(s)	
	10/542,554	BAKALASH ET AL.	
	Examiner	Art Unit	
	Phu K. Nguyen	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the correspondence filed July 18, 2005*.

2. ☒ The allowed claim(s) is/are *1-19*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date October 16, 2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Phu Nguyen

PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2300

The following is an examiner's statement of reasons for allowance:

A method for detecting the greatest number from a plurality of Numbers comprising: a) dividing each of said Numbers into two or more binary Segments, where the bit length of said Segments is determined according to their level of significance and where sets of said Segments are arranged according to their level of significance wherein the first set of Segments includes the Most Significant Segments of said Numbers and the last set of Segments includes the Least Significant Segments of said Numbers; b) simultaneously comparing the numerical values of the Segments having the same level of Significance, determining a group designating the Numbers which the numerical value of their Most Significant Segment is the greatest, and evaluating for the Least Significant Segments a Grade indicating their numerical size in comparison with the numerical value of the other Segments of the same level of significance; c) starting from the second set of Segments, comparing the Grades of the Segments of the Numbers which corresponds to said group, and removing from said group any Number indication with a Grade that is less than the highest Grade which corresponds to another Number indication in said group; d) repeating step c) until the last set of Segments is reached or until a single Number is designated by said group.

A method for compositing a plurality of three-dimensional Sub-Images by examining the Depth values of the Pixels corresponding to same spatial location in each Sub-Image and compositing the content of the Pixel having the greatest Depth value, comprising: a)

dividing each of said Depth values into two or more binary Segments where the bit length of said Segments is determined according to their level of significance and where sets of said Segments are arranged according to their level of significance wherein the first set of Segments includes the Most Significant Segments of said Depth values and the last set of Segments includes the Least Significant Segments of said Depth values; b) simultaneously comparing the numerical values of the Segments having the same level of Significance, determining a group designating the Depth values which the numerical value of their Most Significant Segment is the greatest, and evaluating for the Least Significant Segments a Grade indicating their numerical size in comparison with the numerical value of the other Segments of the same level of significance; c) starting from the second set of Segments, comparing the Grades of the Segments of the Depth values which corresponds to said group, and removing from said group any Depth value indication with a Grade that is less than the highest Grade which corresponds to another Depth values in said group; d) repeating step c) until the last set of Segments is reached or until a single Depth values is designated said group.

A system for compositing a plurality of three-dimensional Sub-Images, comprising: a) Bus lines for concurrently introducing the bits of a plurality of Depth values of pixels, where on each Bus line the bits having the same level of significance are introduced, the logical state of said lines is set to "1" whenever the logical state of all of said bits is "1", and it is set to "0" if the logical state of at least one of said bits is "0"; b) Associative Units for concurrently reading the data of the pixels corresponding to the same spatial

location in said Sub-Images, dividing the Depth value of each read pixel into two or more segments, introducing said segments on the respective lines of said Bus, sensing the logical state of said lines, and accordingly concurrently producing intermediate comparison results for the Most Significant Segments of said values which designates the Depth values having the greatest numerical value, and for the Least Significant Segments Stop-Marks Grading indicating their numerical size in comparison with the numerical value of the other Segments of the same level of significance; c) Promotion Matrices for serially producing intermediate comparison results for each subsequent set of segments in order of significance, starting from the set of segments following the set of Most Significant Segments, by removing from the previously produced intermediate comparison results Depth value designations for which the corresponding Stop-Mark Grading is less than the greatest Stop-Mark Grading that is related to one of said intermediate comparison results, where said Promotion Matrices are capable of indicating that the currently produced intermediate comparison results includes a single designation such that the pixel data can be retrieved for the compositing from the respective Associative Unit.

An Associative Unit for introducing the bits of segments of a Depth value of a pixel on the lines of Wired-AND Bus, issuing Carry-Out and Stop-Mark indications, and enabling the data of said pixel according to a corresponding external enabling indication, comprising: a) Primary Segment Logic circuitry for enabling the introducing of the bits of

the Most Significant Segment of said Depth value on the respective lines of said Bus, sensing the logical state of said lines starting from the Most Significant line, and if the logical states of the sensed line and of the corresponding bit is "0" disabling the sensing of the consecutive Bus lines, otherwise enabling the sensing to proceed until the end of said Segment and issuing a Carry-Out indication; b) One or more Non-Primary Segment logic circuitries for enabling the introducing of the bits of the Least Significant Segments of said Depth value on the respective lines of said Bus, sensing the logical state of said lines starting from the Most Significant line, and if the logical states of the sensed line and of the corresponding bit is "0" disabling the sensing of the consecutive Bus lines and issuing a Stop-Mark indication which corresponds to the level of significance of said bit in its Segment, otherwise enabling the sensing to proceed until the end of said Segment and issuing a Stop-Mark indication having level of significance being one level higher than the Most Significant bit in said Segment; and c) a gate for enabling the output of said data whenever said enabling indication is received, where the logical state of each line of said Bus is set to "1" whenever the logical state of all of the bits introduced on it is "1", and it is set to "0" if the logical state of at least one of said bits is "0", and where said enabling indication is determined externally according to said Carry-Out and Stop-Mark indications.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272 7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phu K. Nguyen
August 3, 2006

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